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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,398	07/09/2003	Jens Bastue	01485.0021-USU-01	9210
22865	7590	02/09/2006	EXAMINER	
ALTERA LAW GROUP, LLC 6500 CITY WEST PARKWAY SUITE 100 MINNEAPOLIS, MN 55344-7704			LAUCHMAN, LAYLA G	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/616,398	Applicant(s) BASTUE ET AL.	
	Examiner L. G. Lauchman	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/2004, 07/2003</u> . | 6) <input type="checkbox"/> Other: ____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Ibsen et al (US 20030067645).

As to Claim 1, the US application '645 teaches a wavelength division multiplexed device, comprising (see Figs 2,6,8): an input port 204; an optical detector 604; at least a first transmissive diffraction grating 214 disposed to diffract light received from the input port to the optical detector, light from the input port being diffracted parallel to a diffraction plane, the first transmissive diffraction grating being oriented so that light reflected by the first transmissive diffraction grating is reflected in a direction non-parallel to the diffraction plane (see Fig. 6); and a first focusing unit 220 disposed between the first transmissive diffraction grating 214 and the optical detector 604, the first focusing unit focusing light from the first transmissive diffraction grating to the optical detector.

As to Claim 2, the input port 204 includes a slit.

As to Claim 3, the input port includes an optical fiber 202.

As to Claim 4, an angle between a direction of reflection and the diffraction plane is greater than 1 degree.

As to Claim 5, the first focusing unit 212 comprises at least one aspherical surface for focusing

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the light [0069].

As to Claims 6 and 9, the device further comprising a collimating unit 208 between the input port and the first transmissive diffraction grating, and the collimating unit is positioned at a distance from the input port such that light passing from the collimating unit to the first transmissive diffraction grating is collimated.

As to Claims 7 and 8, the collimating unit comprises an achromatic lens system and at least one aspheric optical surface [0063, 0115].

As to Claims 10 and 11, the optical detector 604 comprises an array of detector elements and the optical detector has a detector width, and an angle between a direction of reflection and the diffraction plane is selected so that the light reflected from the transmissive diffraction grating that is also reflected back through the transmissive diffraction grating reaches a focal plane of the first focusing unit separated from signal light at the detector by at least one half of the detector width [0090].

As to Claim 12, the first transmissive diffraction grating is attached to a grating frame by a mounting, the mounting of the transmissive diffraction grating permitting independent expansion and contraction of the transmissive diffraction grating and the frame under conditions of changing temperature [0086].

As to Claim 13, the mounting comprises a portion of adhesive located at a selected position along the grating frame [0084-0086].

As to Claims 14 and 15, the mounting comprises at least one or more clips holding the first transmissive diffraction grating to the frame and the mounting comprises an elastic adhesive positioned along the frame between the frame and the first transmissive diffraction grating

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[0084].

As to Claim 16, the device further comprising an analyzer 608 coupled to the detector to analyze detection signals produced by the detector.

As to Claim 17, the device further comprising at least a second transmissive diffraction grating 216 positioned on an optical path between the input port and the optical detector.

As to Claim 18, the US application '645 teaches a wavelength division multiplexed device, comprising (see Fig. 8), comprising: an input port 204; an optical detector defining an active aperture (Figs 8, 9a, 9b), at least a first transmissive diffraction grating 214 disposed to diffract light received from the input port to the optical detector; and a first focusing unit 220 disposed between the first transmissive diffraction grating and the optical detector, the first focusing unit focusing light from the first transmissive diffraction grating to the optical detector; wherein the first transmissive diffraction grating is oriented so that light, reflected from the transmissive diffraction grating and reflected back through the transmissive diffraction grating, reaches a focal plane of the first focusing unit outside the active aperture [0097, 0098].

As to Claim 19, a method, comprising (see Fig. 8): passing light from an input port 204 to the first transmissive diffraction grating 214; diffracting the light in a diffraction plane by the first transmissive diffraction grating; focusing the light diffracted by the first transmissive diffraction grating to a detector defining an active aperture; and orienting the first transmissive diffraction grating so that light reflected by the first transmissive diffraction grating is reflected out of the diffraction plane [0097, 0098].

As to Claim 20, the method further comprising collimating (210) the light passing from the input port to the first transmissive diffraction grating.

As to Claims 21-23, the method, further comprising selecting an angle between the light reflected by the first transmissive diffraction grating 214 and the diffraction plane so that the light, reflected by the first transmissive diffraction grating and reflected back through the first transmissive diffraction grating, is focused to a position outside the active aperture (see Fig. 9a and 9b) and further comprising analyzing detection signals produced by the detector.

As to Claim 24, the US application '645 teaches a wavelength division multiplexed device, comprising (see Fig. 8), comprising: an input port 204; an optical detector 604; at least a first diffraction grating 214 unit disposed to diffract light received from the input port to the optical detector, light from the input port being diffracted parallel to a diffraction plane, the first diffraction grating unit comprising a diffraction grating attached to a frame using a mounting [0084,0085], the mounting permitting independent thermal expansion and contraction of the grating and the frame under conditions of changing temperature; and a first focusing unit disposed between the optical detector and the first diffraction grating unit [0086], the first focusing unit focusing diffracted light from the first diffraction grating unit to the optical detector.

As to Claim 25-30, the mounting comprises a portion of adhesive at a position along the grating frame, the portion of adhesive is disposed at one end of the grating frame, one or more clips

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holding the transmissive diffraction grating to the grating frame, the mounting comprises a layer of elastic adhesive disposed between the grating and the grating frame (see [0084-086]).

As to Claims 31-35, the diffraction grating is disposed at an angle to reflect light in a direction nonparallel to the plane of the diffraction; the diffraction grating comprises a transmissive diffraction grating, further comprising a first collimating unit 210 between the input port and the first diffraction grating unit.

As to Claim 36, the first collimating unit is positioned at a distance from the input port such that light from the input port is collimated by the first collimating unit.

As to Claim 37, the optical detector comprises an array of detector elements 604.

As to claim 38, the optical detector defines an active aperture, and the first transmissive diffraction grating is oriented so that a direction of reflection off the first transmissive diffraction grating is such that light reflected by the first transmissive diffraction grating and reflected back through the first transmissive diffraction grating reaches the focal plane of the first focusing unit outside the active aperture of the optical detector [0097, 0098].

As to Claim 39, the device, further comprising an analyzer 608 coupled to the detector to analyze detection signals produced by the detector.

As to claim 40, the device, further comprising at least a second transmissive diffraction grating

unit 216 disposed on an optical path between the input port and the optical detector.

As to Claim 41-48, the US application '645 teaches method of mounting a diffraction grating to a frame, comprising: attaching the diffraction grating to the frame while permitting independent thermal expansion and contraction of the diffraction grating and the frame under conditions of changing temperature (see [0082-0088]). The attaching the diffraction grating to the frame comprises attaching the diffraction grating to the frame using a portion of adhesive at a position along the grating frame. The attaching the diffraction grating to the frame comprises clipping the diffraction grating to the grating frame using one or more clips.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Ibsen et al (US 20030067645).

As to Claim 49 the US application '645 teaches a wavelength division multiplexed device, comprising (see Fig. 8), comprising, comprising; an input port 204; an optical detector 604; at least a first transmissive diffraction grating unit 214 disposed to diffract light received from the input port to the optical detector, the first transmissive diffraction grating unit comprising a transmissive diffraction grating attached to a frame using a mounting [0097,0098]; and a first

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focusing unit 220 disposed between the optical detector and one transmissive diffraction grating unit, the first focusing unit focusing diffracted light to the optical detector.

The application does not specifically disclose that the at least one diffraction grating unit, the first focusing unit and the optical detector are arranged to operate at light wavelengths in excess of 100 nm, and the temperature dependent wavelength shift of diffracted light at the optical detector is no more than 0.01 nm/K. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Therefore, the device of Ibsen would be able yield the claimed outcome, since the structural limitations of the claimed device do not differentiate form the device of Ibsen.

The first transmissive diffraction grating is formed in fused silica [0066].

The device of Ibsen further comprising at least a second 216 transmissive diffraction grating unit disposed on an optical path between the input port and the optical detector.

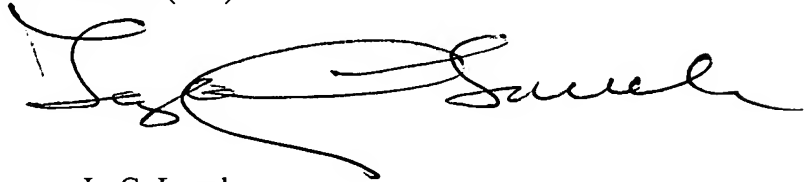
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to L. G. Lauchman whose telephone number is (571) 272-2418.

The examiner’s normal work schedule is 8:00am to 4:30pm (EST), Monday through Friday. If attempts to reach examiner by the telephone are unsuccessful, the examiner’s supervisor Gregory J. Toatley, Jr. can be reached on (571) 272-2059, ext. 77.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC receptionist whose telephone number is (571) 272-1562.

A handwritten signature in black ink, appearing to read 'L. G. Lauchman', with a long, sweeping horizontal stroke extending to the right.

L. G. Lauchman
Primary Examiner
Art Unit 2877

February 5, 2006